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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,227	04/12/2004	Manfred Weigl	TER-01P23380	4627
24131 7590 08/08/2007 LERNER GREENBERG STEMER LLP P O BOX 2480 HOLLYWOOD, FL 33022-2480			EXAMINER VIDAYATHIL, TRESA V	
			ART UNIT 3746	PAPER NUMBER
			MAIL DATE 08/08/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/823,227

Applicant(s)

WEIGL, MANFRED

Examiner

Tresa V. Vidayathil

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 11-13 is/are pending in the application.
- 4a) Of the above claim(s) 4-10 and 14-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 11-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>412/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group 1, claims 1, 11, 2, 3, 12, and 13, in the reply filed on July 19, 2007 is acknowledged.
2. Claims 4-10 and 14-20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on July 19, 2007.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a) because they fail to show the sensor diaphragm as described in the specification. Currently, the sensor diaphragm is depicted as a line. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d).
4. The drawings are objected to because hatching must be used to indicate section portions of the object. The sensor and sensor diaphragm are not indicated by hatch marks.
5. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure

number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 1, 2, 3, 11, 12, and 13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 1 and 11 and the specification (first mentioned p. 7, ll. 16-17) state that the pressure sensor diaphragm records the pressure of the reducing agent. Normally, a diaphragm functions as a deformable membrane that seals one side

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of the membrane from the other side of a membrane. A pressure sensor is normally used to sense a pressure in a specific location in a system. The applicant's use of the pressure sensor diaphragm seems contrary to the conventional use of a diaphragm. Pressure sensors of the diaphragm type do exist as noted in Faisandier 3,939,758 (col. 1, ll. 14-15), but it is not the diaphragm that records the pressure (col. 2, l. 67 – col. 3, l. 20). Therefore, claims 1 and 11 are not enabled.

For purposes of examination, the Examiner will assume that the pressure sensor is recording the pressure.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 2, the applicant claims an end of the central support body facing the electromagnet and the armature plate disposed at said end of said drive shaft. An end of the drive shaft is never claimed. In addition, neither the specification nor the drawings disclose the armature plate disposed at the end facing the electromagnet. Therefore, for purposes of examination, the Examiner will assume that "the end" that the armature is disposed on is the end furthest from the central support body.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. Claims 1, 2, 3, 11, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hilgert 3,411,704 in view of Rembold 6,162,028, in view of Owens 5,554,013, and further in view of Faisandier 3,939,758.

Hilgert discloses: pump casing (12, 13, 14) having a base 14 and defining an inlet passage 18 and an outlet passage 20, central support body 29 disposed in said casing (12, 13, 14), spring 32 disposed in said casing and imparting a force against said central support body 29 (col. 4, ll. 48-64), pump diaphragm 16 disposed in said casing to define a reducing agent chamber 17 thereabove with respect to said base 14 and having two limit positions (col. 4, ll. 48-64), electromagnet (23, 39, and col. 3, l. 36)

disposed at said base 14 and operatively connected to said pump diaphragm 16 to move said pump diaphragm 16 to and from with respect to said central support body 29 between said limit positions (col. 4, ll. 48-64) counter to said force of said spring 32 upon actuation of said electromagnet (23, 39, and col. 3, l. 36) (col. 4, ll. 48-64), non-return inlet valve 19 fluidically connected to said inlet passage 18 for supplying reducing agent to said reducing agent chamber 17, non-return outlet valve 21 fluidically connected to said outlet passage 20 for discharging the reducing agent, electromagnet (23, 39, and col. 3, l. 36) has an armature plate 26, central support body 29 has an end (Fig. 1 – see top part of 29) facing said electromagnet (23, 39, and col. 3, l. 36), central support body 29 has a drive shaft 27 at said end (Fig. 1 – see top part of 29) facing said electromagnet (23, 39, and col. 3, l. 36) and said armature plate 26 is disposed at said end (Fig. 1 – top end of the shaft 27) of said drive shaft 27, and armature plate 26 is connected to said drive shaft 27 by a connection selected from the group consisting of an adhesive bond, a weld, a press-fit, and a screw connection (col. 4, ll. 18-21 – 26 and 27 secured by press-fit).

Regarding the limitation that the pump has a reducing agent chamber and pumps reducing agent, Hilgert has a chamber for pumping air. Hilgert's pump is capable of being used to pump reducing agent.

However, Hilgert does not teach the following limitations that are taught by Rembold: pump diaphragm having a first side (Fig. 1 – outer ends) secured to said pump casing (11, 31) and a second side (Fig. 1 – inner ends) secured to said central support body 42 (see Fig. 1)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Rembold with a pump diaphragm that is connected on one side to the pump casing and the other side to a central support body, as taught by Rembold, in order to reinforce the diaphragm (col. 2, ll. 54-57).

However, Hilgert in view of Rembold does not teach the following limitations that are taught by Owens: pressure sensor 91 connected to said pump casing 30.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hilgert in view of Rembold with a pressure sensor on the pump casing, as taught by Owens, in order to improve the pressure reading accuracy (Owens, col. 6, ll. 45-48).

However, Hilgert in view of Rembold in view of Owens does not teach the following limitations that are taught by Faisandier: pressure sensor (10, 12, 11, 13, 14, 15, and 19) having a pressure sensor diaphragm 12. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hilgert in view of Rembold in view of Owens with a pressure sensor that includes a diaphragm, as taught by Faisandier, in order to provide a pressure sensor with a diaphragm that can sense hydraulic pressure reliably (Faisandier, col. 1, ll. 14-35).

The combination of Hilgert in view of Rembold in view of Owens and further in view of Faisandier is capable of recording a pressure of a reducing agent in a pump casing above said pump diaphragm and being disposed to have said pump diaphragm absorb an increase in volume of the reducing agent when the reducing agent freezes

inside said reducing agent chamber by said pump diaphragm deviating counter to said force of said spring.

Double Patenting

13. Applicant is advised that should claim 1 be found allowable, claim 11 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

14. Applicant is advised that should claims 2 and 3 be found allowable, claims 12 and 13 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. Currently, claims 12 and 13 are identical to claims 2 and 3. In addition and like claims 2 and 3, claims 12 and 13 are dependent on claim 1. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Conclusion

15. Applicant is duly reminded that a complete response must satisfy the requirements of 37 C.F. R. 1.111, including: "The reply must present arguments pointing out the specific distinctions believed to render the claims, including any newly presented

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claims, patentable over any applied references. A general allegation that the claims "define a patentable invention" without specifically pointing out how the language of the claims patentably distinguishes them from the references does not comply with the requirements of this section. Moreover, "The prompt development of a clear Issue requires that the replies of the applicant meet the objections to and rejections of the claims." Applicant should also specifically point out the support for any amendments made to the disclosure. See MPEP 2163.06 and MPEP 714.02. The "disclosure" includes the claims, the specification and the drawings.

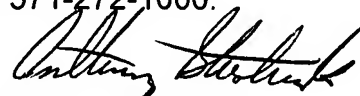
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tresa V. Vidayathil whose telephone number is (571) 272-3436. The examiner can normally be reached on 9AM - 5:30PM, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Stashick can be reached on (571) 272-4561. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


TV


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Art Unit 3746